

## § 160.077-21

## 46 CFR Ch. I (10-1-12 Edition)

except that 25 mm by 200 mm (1 in. by 8 in.) samples may be used where insufficient length of straight seam is available.

(e) The Commandant may prescribe additional tests, if necessary, to approve unique or novel designs.

[CGD 78-174, 50 FR 33928, Aug. 22, 1985, as amended by CGD 78-174, 60 FR 2487, Jan. 9, 1995; USCG-2000-7790, 65 FR 58463, Sept. 29, 2000]

### § 160.077-21 Approval Testing—Type I and Commercial Hybrid PFD.

(a) *General.* This section contains commercial hybrid PFD approval tests. The provisions of § 160.077-19(a) apply to each test in this section.

(b) *Tests.* Each test prescribed in § 160.077-19(b), except the tests in paragraphs (b)(2), (b)(3)(i), (b)(3)(ii), and (b)(6), must be conducted and passed.

(c) *Additional tests.* Each PFD design must also be tested according to the procedures in the following tests and meet the requirements in these tests:

(1) *Jump test*, UL 1517, section S6 for Adult size. Youth and Small Child sizes are exempt from this test.

(2) *In-water removal*, UL 1517, section S9 for Adult and Youth sizes. The Small Child size is exempt from this test.

(3) *Buoyancy and inflation medium retention test*, UL 1517, Section S10, except the minimum buoyancies must be as specified in the Table 160.077-17(b)(11):

(4) *Flotation stability.*

(i) *Uninflated flotation stability*, UL 1517, section S7, except that for Type I devices the requirements of paragraph S7.1.A apply to all subjects regardless of their in-water weight. For Type V adult-size devices the requirements of paragraph S7.1.A apply to all adult subjects having an in-water weight of 13 lb or less, and the requirements of paragraph S7.1.B apply to all other adult subjects.

NOTE: —If the freeboard of a test subject is close to zero, caution must be taken to prevent the subject from inhaling water. The subject may use lightweight breathing aids to avoid inhaling water.

(ii) *Righting action test*, 46 CFR 160.176-13(d)(2) through (d)(5) for Type I hybrid PFDs. UL 1517, Section S8, for Type V hybrid PFDs.

(5) *Flotation stability—youths and small children.*

(i) *Uninflated flotation stability*, UL 1517, section S7, except that the requirements of paragraph S7.1.A apply to all subjects regardless of their in-water weight.

(ii) *Righting action test*, UL 1517, Section 15.3 through 15.13, for Youth and Small Child hybrid PFDs except comparisons are to be made to the appropriate size and type reference vest as defined in § 160.077-2(j).

(d) *Flotation Stability Criteria.* At the end of the righting action test—

(1) At least 75% of the PFD's retroreflective material on the outside of the PFD, and the PFD light, must be above the water when the subject is floating in the stable flotation attitude; and

(2) The subject when floating in the stable flotation position and looking to the side, must be able to see—

(i) The water no more than 3 m (10 ft.) away; or

(ii) A mark on a vertical scale no higher than the lowest mark which can be viewed when floating in the same position in the reference vest defined in § 160.077-3(j).

(3) Each adult test subject must have a freeboard of at least:

(i) 100 mm (4 inches) if the PFD being tested is to be approved as a Type I hybrid PFD; or

(ii) 120 mm (4.75 inches) if the PFD being tested is to be approved as a SOLAS lifejacket.

(e) *Visual Examination.* One complete PFD must be visually examined for compliance with the requirements of § 160.077-15 and § 160.077-17.

(f) *Inflation Chamber Properties.* If the tests in paragraphs (b) and (c) of this section are completed successfully, the tests in § 160.077-19(d) must be run.

(g) The Commandant may prescribe additional tests, if necessary, to approve unique or novel designs.

[CGD 78-174, 50 FR 33928, Aug. 22, 1985, as amended by CGD 78-174, 60 FR 2488, Jan. 9, 1995; 60 FR 7131, Feb. 7, 1995; CGD 95-072, 60 FR 50466, Sept. 29, 1995]